

The Factors Affecting Liquidity Risk of Commercial Banks in Malaysia

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Abstract

[Background] Recent global financial crisis has shed a light on the importance of liquidity management of commercial banks. Liquidity risk, a risk arising from maturity mismatch of assets and liabilities of the banks could result in bank panic that will cost tremendous loss to the economy of the country if not properly handled. As the liquidity risk will impact the nation's economic well-being, it is of paramount importance to study the factors affecting liquidity risk of commercial banks in Malaysia.

[Objective] The purpose of this paper is to investigate the determinants that are affecting the liquidity risk of commercial banks in Malaysia.

[Methodology] Four economic factors namely unemployment rate, Gross Domestic Product (GDP), inflation, interest rate and one non-economic factor, management efficiency have been selected to test the association. The data from year 1996 to 2015 and all commercial banks were chosen. Multiple linear regression together with three other different tests namely normality test, linearity test and multicollinearity test were employed to test the relationship of the independent and dependent variables.

[Results] The findings show that GDP is negatively related to liquidity risk. This implies that higher GDP growth may increase the liquidity risk of commercial banks in Malaysia. At the same time, there is weak evidence to support the notion that inflation rate, unemployment rate, interest rate and management efficiency impact banks' liquidity.

[Discussion] Policymakers must take into account the impact of GDP growth in formulating liquidity risk management framework for commercial banks in order to ensure stability and sustainability of financial system in Malaysia.

Keywords: Liquidity Risk, GDP growth, Bank Panic

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1.0 Introduction

Bank has existed for decades to act as the financial intermediaries for the depositors (surplus unit) and the borrower (deficit unit). The banking system works in the way of collecting deposit from the depositors and pay them an amount of interest rate and lend it to the borrower by charging a higher interest rate than the

depository interest rate. The profit of bank comes from the interest gap between both loan and deposit. (Brewer, 2013) For asset (loan) and liability (deposit) which are more than 1 year are known as non-current with fixed-interest rate which will not be subject to any changes. The imbalance maturity between both long-term asset and long-term liability will lead to liquidity risk if the bank could not meet the short-

term debt obligations. Bank has a difficulty to convert an asset into cash.

On 15 August 2017, The Star Online has reported that Association of Banks in Malaysia (ABM) has announced that the loan-to-deposit ratio (LDR) of Malaysia financial institution is at a worry level. (The Star Online, 2017) According to NASDAQ (2017), the lower LDR will leads to a financial institution does not have cash on hand for contingencies. (Tea, 2017) ABM explained that the misleading reporting on asset and liability positions will cause misrepresent the liquidity situation in the marketplace. However, the LDR of banking sector has a great increment since 2011 by absorbing more deposits hovering between 86.7% to 89.3% from year 2014 to 2017. Besides LDR, there are other indicators such as Liquidity Coverage Ratio (LCR), loan-to-fund ratio (LTF) and loan-to-fund-and equity ratio (LTFE) can be used to measure the liquidity of the financial institution. The LCR of commercial banks stood above 142% as reported at June 2017, where it is 62% higher than the minimum transitional requirement in 2017. It shows that the Malaysia's financial institutions are all working at healthy situation in term of liquidity.

According to Aisyah Abdul-Rahman et.al (2017), they have found that financing structure in Malaysia banks has a positive association to both short and long-term liquidity risk exposures. Bank to finance the housing sector is a significant area which shows a higher exposure in the housing sector with leads to a higher liquidity risk for banks. Apart from that, a stable short-term financing will result in higher liquidity risk. With medium-term financing structure stability will impact the long-term liquidity risk of Islamic banks; where financing concentration affects long-term liquidity risk of conventional banks in Malaysia.

As stated on top, the Malaysia's financial institutions are working in a proper manner in dealing with the liquidity risk while operating their business. The main players in the Kuala Lumpur Composite Index (KLCI) are the 6 banks namely Ambank, HongLeong Bank, Malayan Bank, Public Bank, CIMB Group and Public Bank which weighted 36.4% of the Malaysia index which are part of the commercial bank being discussed in this paper. (Bursa Malaysia, 2019) However, it is important for people to understand more about the liquidity risk faced by the financial institutions in Malaysia and the economy determinants that will affect the liquidity risk in Malaysia's banking system. It will create a huge crisis to the economic of the country and will definitely affect the people living in Malaysia.

Apart from that, the banking industry is vital to the country as it support the entire operation of economy as well as the country's operation. It is vital for the growth of country's economy. A country could not afford the banks to collapse. For instance, Greece has shown the greatest example when they suffer from a bank run, when the depositors were urging to withdraw deposit from Greece's bank for almost \$900 million. (Mucha, 2012) Until today, Greece still suffer from huge amount of unpayable debt and still a bankrupt country. Hence, this research conducted is mainly focus on the bank, when the business model of banking could mitigate the existence of risks, we need to know how to handle and manage the risks. In this research, liquidity risk is being highlighted as the topic to be discussed together with the economy determinants that affecting it in the Malaysia's banking system.

Risks are imitable in the banking system in every country because the main business of banking is getting profit from issuing loan to the public. According to AboliGangreddiwar (2015), banking

system will face 8 types of risk namely credit risk, market risk, operational risk, liquidity risk, reputational risk, business risk, systemic risk and moral hazard. Liquidity risk can be known a risk stemming from the lack of marketability of an asset that could not be convert into cash immediately. It is mainly due to the mismatch of the maturity between asset and liability to cause to have a difficulty on cashflow. It is vital for investors, regulators and bank operators to have a deep understand on the liquidity risk, when it may cause the bank to suffer bank runs. The first bank run happened in Nashville, Tennessee in 1930, Tennessee Hermitage National Bank only had limited deposits on hand. Due to cash shortage, banks were forced to liquidate the loans and sell assets to supplement the mass withdrawals. (Mazza, 2018) In year 2008, the mortgage lender of the United State named IndyMac Bank was seized by federal regulator. The bank financed all the secured borrowings by relying on high cost, less stable and brokered deposits. The bank was forced to downgrade to and rated as the poor category bank and caused another bank run happens when the deposits of the bank was being withdrew with approximately 7.5% of the total bank deposits. This incident caused the IndyMacbank to collapse and suffer from a bank failure. (Isidore, 2018) When the deposits of a bank are being withdraw, it proves that the bank has less money to fund its daily operation and issuing loan to the needy. Hence, managing the liquidity risk is relatively important by measuring all the expected and unexpected incident to prevent the liquidity level of a bank to be affected.

In the recent Basel Accord – Basel III which is the international regulatory framework for all the banks in the world. Basel III is known as the international agreed set of rules and measures which developed by the Basel Committee on Banking mainly because of the financial

crisis happened in year 2007. The purpose of Basel III is to strengthen the banking regulation, supervision and risk management of banks. (Basel Committee on Banking Supervision, 2018) Under Basel III, liquidity was one of the issues being underlined as they revised the Liquidity Coverage Ratio (LCR). The LCR was claimed to be a useful indicator to be used as global regulatory standards on bank capital adequacy and liquidity endorsed by the G20 leaders. It promotes short-term resilience for bank's liquidity risk profile. It ensures the bank has adequate amount of unencumbered high-quality liquid assets (HQLA) which could be converted into cash easily without incurring any losses immediately in the private market to meet the short-term liquidity needs for 30 calendar days liquidity stress scenario. The Basel Committee aim to improve the banking sector's ability to tolerate shocks arising from financial and economic stress which could minimize the risk of spill over from the financial sector to the real economy. (Basel Committee on Banking Supervision, 2018)

Previous researches have a different outcome and perspective on the similar topic due to the different context, background and duration. In another way saying that inconclusive gap is found in all the researchers as they have conflict in their result. This research is designed to solve the academic gap by identifying the most suitable scenario that suits the Malaysia context.

2.0 Literature Review

The selected macroeconomic factors are unemployment rate, gross domestic product (GDP), interest rate and inflation rate, while the bank-specific factor is management efficiency.

I. Unemployment Rate

From the point of view of the researcher, the researcher believes that the unemployment rate has a positive association with the liquidity risk in Malaysia's commercial banks. If the unemployment rate of Malaysia increases, it means that the jobless capable workers in the country increases.

According to IonicaMunteanu (2012), a research has been done on the liquidity risk in the bank in Romania. The research was done by collecting data from year 2002 to 2010, the result shown that the unemployment rate has a positive correlation with the liquidity risk in the Romania's bank. According to Horváth et al. (2014), unemployment brings a significant negative impact to the Indian banks on liquidity. The increase in the unemployment rate reduced the capital and hampered liquidity creation. It is being proven with the fact that the Indian banks has been suffered from a reduction in solvency and create lower liquidity in troubled economic times. Lastly, a study by Munteanu (2012) which has conducted a study in India as well has suggested that saying increase in unemployment rate will cause a spike in the bank liquidity.

According to PavlaVodová (2011), a research has been done on the liquidity of Czech commercial banks and its determinants. The researcher claimed that there is no significant effect on the liquidity of Czech commercial banks as the tests shown that they are insignificant. Besides that, the researcher has done a similar research which test on the determinants of commercial banks liquidity in Hungary. The result of the research shows the same as above where the unemployment rate has no significant effect on the liquidity risk in Hungary's commercial banks. (Vodova, 2013) Besides, a research has been done by Dorianacucinelli (2014) in the Euro zone to investigate the determinants of banks liquidity risk within the context of Euro

Area. The researcher has claimed that the unemployment rate in the Euro Area has no significant effect on the liquidity risk faced by the banks as the results shown are insignificant. According to Ferrouhi et al. (2013), they have conducted a study in Morocco by using data from 2001 to 2012, the result has shown that unemployment rate has no impact on bank's liquidity.

By studying all the past researchers that have been carried out, the researcher believes that the unemployment rate will have no significant relationship to the liquidity risk in Malaysia's banking system. It is because most of the result from past papers have shown that unemployment rate will not cause an impact on bank's liquidity. In another way saying that it will not increase in Malaysia Commercial Bank's liquidity risk.

II. Gross Domestic Product (GDP)

From the point of view of the researcher, he strongly believes that the GDP of a country will have a close relationship with the liquidity risk in Malaysia's commercial banks. When the GDP of a country increases, it simply means that the total value of products and services produced in the country increases regardless produced by citizens or foreigners. It will definitely give a boost on the country economy with the increase in GDP.

According to Angora and Roulet (2011), the researchers have highlighted the relationship between liquidity risk by measuring with liquidity indicators such as LCR and NSFR. The study shows that the liquidity risk ratio has a positive correlation with the macroeconomic variable such as GDP. Besides that, a study has been done by Al-Khoury (2012) conducted a study among the gulf cooperation council countries such as Kuwait, Oman and Qater saying that with the increase of real GDP growth in the

country will cause a positively influence to the entire banking system of the country. Followed by that, Choon et al. (2013) has conducted a study in Malaysia which produced a result saying that GDP lead to a positively affects on bank liquidity while financial crisis will cause a negatively impact on bank liquidity. Lastly, a study conducted by Mousa (2015) in Tunisia has shown the result of significant impact of GDP on the bank liquidity in Tunisia.

According to Valla (2006), the analyst over a panel of English banks has done a research on the topic of liquidity risk and claimed that the GDP has no correlation with the liquidity risk in banks which seen as an opportunity cost to hold the liquidity asset in the bank's portfolio. According to Aspachs et al. (2005) which has conducted a study in the United Kingdom (UK) from year 1985 to 2003 saying that UK Banks are less likely to hold a huge amount of liquidity when GDP increased and vice versa.

By investigating all the results from the past papers, the researcher believes that GDP has a relatively significant relationship with the liquidity risk in Malaysia's commercial banks as most of the research papers have shown that both are positively associated.

III. Interest Rate

From the researcher's point of view, he believes that the interest rate will have strong positive association with the liquidity risk in Malaysia's commercial banks. When the regulator of a country increases the interest rate of the country, it will attract the people of the nation to save more instead of investing in other investment tool. Besides that, it will definitely attract the foreign fund to park their money with the bank to enjoy higher return.

According to Marek Szajt (2015), the researcher has claimed that the positive

relation between the actual increase in the interest for overnight deposit transaction in the interbank market and the rise in the liquidity level in Europe Union banks which encourage the banks to increase money market engagement. Hence, they are directly proportional to each other. Besides that, research conducted by Almaqtari et al. (2018) which have examined on the bank-specific and macroeconomic factors that determined the liquidity risk on Indian commercial banks. The researchers have their findings stated that interest rate has a significant relationship with the liquidity of commercial banks in India. Next, Valla et al. (2006) has done an analysis over the panel English banks which reported that there is a negative correlation between net interest margin with the liquidity risk for the English Banks. It is known that net interest margin will cause the English Banks have an opportunity cast to hold the liquid assets. Lastly, Tibebu (2019) has conducted a study which shows the result that when the size of interest rate margin increases, the lenders will tend to give up their liquid money. It says that with the increase of interest rate spread, it will cause the share of liquid assets for banks to decrease.

According to Luchetta (2007), the researcher has claimed that the more liquid of a bank is, the more it will invest in the interbank market. Besides that, the research proves that the interest rate will be a reward to hold the liquid asset. Besides that, liquidity has validated to be negative related to the interest rate.

By investigating all the results from the past papers, the researcher believes that interest rate has a significant relationship with the liquidity risk in Malaysia's commercial banks as most of the research papers have shown that both are positively associated.

IV. Inflation Rate

From the researcher's point of view, he believes that inflation has a negative relationship with the liquidity risk in Malaysia's commercial banks. When the interest rate of a country increases, it will cause the inflation to increase as well. The increase in inflation can be explained in two ways which are increase in price of all the products and services in the nation and decrease in the purchasing power of people.

According to Seferli (2010), he examined the impact of economic factors on the performance of the Azerbaijan's banking system performance from year 2003 to 2008, by using 29 commercial banks as the sample group in the research. The researcher discovered that inflation has a negative impact on the liquidity risk, while the liquidity risk has an inversely proportional to the inflation rate. Besides that, according to IonicaMunteanu (2012), the researcher has discovered that the inflation has a negative association from year 2002 to 2007 to the liquidity risk of banks. However, the result from year 2008 to 2010 shows that the inflation has a positive association from year 2008 to 2010. The researcher claimed that the relationship between inflation and liquidity risk of banks changed due to the cause of financial crisis happened in 2007 and the years after will be the recovery years from the crisis. Ghenimi and Omri (2015) has conducted a research on the liquidity risk management in conventional banks and International Banks (IBs) from year 2006 to 2013. The findings from the researchers show that inflation rate is one of the determinants which have a positive association with liquidity risk in IBs.

According to Bunda and Desthe (2008), the researchers have conducted a study on 1107 commercial banks in 36 emerging countries, the research has been conducted in the way of finding the capitalization measured by the ratio between equity and total asset which found to have positive correlation between

inflation rate and liquidity risk in banks. It found that both variables are directly proportional. Moreover, Djalilov and Piesse (2016) has conducted the study on 275 commercial banks from 16 different countries. The study includes inflation rate as one of the independent variables to evaluate the impact on liquidity of the commercial banks in the sample banks. The study found that inflation rate has a statistically insignificant to the liquidity risk.

By investigating all the results from the past papers, the researcher believes that inflation rate has a relatively significant relationship with the liquidity risk in Malaysia's commercial banks as most of the research papers have shown that both are positively associated.

V. Management Efficiency

From the researcher's point of view, he believes that the management efficiency has a positive relationship with the liquidity risk in Malaysia's commercial banks. Management efficiency means that the effort that being input by the managers will the output being produced. All the firms aim for high management efficiency with the least input and the maximum output.

A study which has done by Mohammed (2014) with the topic of the role of ratio analysis in business decisions which chosen a case study of NBC Maidugri Plant. The study was done by collected primary data and interviewing a number of interviewees to obtain the result. It shows that asset turnover ratio will cause a significant impact to the liquidity asset holding of NBC Maidugri Plant. Hence, it shows that both variables have significant relationship. Besides that, Sarbapriya (2011) has conducted a study regarding to the financial performance of paper and paper product companies in India in Post-Liberalization Period.

However, there is also study that found that there is no significant relationship between asset turnover ratio and liquidity ratio. For instance, a study has been conducted by Ramon et al. (2012) by taking the research period from year 2009 to 2011 which found a result that asset turnover ratio has significantly no relationship with liquidity asset from the education sector perspective of Philippines.

By investigating all the results from the past papers, the researcher

believes that management efficiency does has a relatively significant relationship with the liquidity risk in Malaysia's commercial banks as most of the research papers have shown that both variables do not have significant relationship.

3.0 Presentation and Analysis of Data

The output below shows the ordinary least squares of all the variables being tested in this research.

Dependent Variable: LR Method: Least Squares Date: 05/11/19 Time: 14:36 Sample: 1996 2015 Included observations: 20				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
ATOR	0.081488	0.808093	0.100839	0.9211
LCPI	-0.246285	0.414326	-0.594422	0.5617
LGDP	-0.284437	0.118972	-2.390794	0.0314
IRS	-0.038358	0.018440	-2.080206	0.0564
UR	-0.036694	0.029769	-1.232659	0.2380
C	9.807508	1.553609	6.312728	0.0000
R-squared	0.971968	Mean dependent var	0.784824	
Adjusted R-squared	0.961957	S.D. dependent var	0.158401	
S.E. of regression	0.030896	Akaike info criterion	-3.873081	
Sum squared resid	0.013364	Schwarz criterion	-3.574361	
Log likelihood	44.73081	Hannan-Quinn criter.	-3.814768	
F-statistic	97.08639	Durbin-Watson stat	1.266290	
Prob(F-statistic)	0.000000			

The equation of the model above is $Y = 0.081488ATOR - 0.246285LCPI - 0.284437LGDP - 0.038358IRS - 0.036694UR$. In this case, $Y = LR$.

H₀: The relationship is not significant, probability > significant level = 0.05

H₁: The relationship is significant, probability < significant level = 0.05

ATOR: The result for ATOR shows that the relationship between LR and ATOR is not significant because the probability is more than 0.05 (5%) which is 0.9211 (92.11%). H₀ is being accepted and the relationship could not be detected between ATOR and LR.

LCPI: The result for LCPI shows that the relationship between LR and LCPI is not significant because the probability is more

than 0.05 (5%) which is 0.5617 (56.17%). H_0 is being accepted and the relationship could not be detected between LCPI and LR.

LGDP: The result for LGDP shows that the relationship between LR and LGDP is significant because the probability is less than 0.05 (5%) which is 0.0314 (3.14%). In this case, we reject H_0 and H_1 is being accepted and the relationship is being detected between LGDP and LR.

IRS: The result for IRS shows that the relationship between LR and IRS is not significant because the probability is more than 0.05 (5%) which is 0.5617 (56.17%). H_0 is being accepted and the relationship could not be detected between IRS and LR.

UR: The result for LCPI shows that the relationship between LR and LCPI is not significant because the probability is more than 0.05 (5%) which is 0.5617 (56.17%). H_0 is being accepted and the relationship could not be detected between UR and LR.

In summary, we can conclude that Gross Domestic Product (GDP) has a significant relationship with Liquidity Risk (LR) because the probability of LGDP is less than 5%, the relationship between both variables are being proven. In another hand, other independent variables namely Asset Turnover Ratio (ATOR), Consumer Price Index (CPI), Interest Rate Spread (IRS) and Unemployment Ratio (UR) cannot be detected from the multicollinearity test as the probability is more than 5%.

4.0 Result Interpretation

The main aim of the study is to determine which are the determinants affecting the liquidity risk of Malaysia's Commercial Banks the most. Thus, this research involved investigating the effect of 4 macroeconomics factors namely Gross Domestic Product (GDP), Inflation Rate, Interest Rate, Unemployment Rate

and 1 non-economic factor which is Management Efficiency.

I. Findings on Impact of Gross Domestic Product (GDP) toward Liquidity Risk

The empirical study found that gross domestic product (GDP) has a significant relationship with the liquidity risk. Through the multiple regression model showed that the GDP has a p-value at 0.0314 (3.14%) which is below than 0.05 or 5% significant benchmark level. Furthermore, GDP has the Beta (β) at -0.284437. This indicates that 1 percentage increase in GDP will cause the liquidity risk to decrease by 0.284437.

The findings from the study's analysis that has been conducted concluded that GDP is the indicator that contributed in the liquidity risk in Malaysia. Hence, the hypothesis null is being rejected and alternative hypothesis is being accepted.

H_0 : There is no significant relationship between both GDP and liquidity risk in Malaysia's commercial banks.

H_1 : There is significant relationship between both GDP and liquidity risk in Malaysia's commercial banks.

It is consistent with the inference of the researcher that have made, saying that the GDP will have a significant relationship with the liquidity risk in Malaysia's Commercial Banks. From the findings of the study, it has shown that GDP is negatively associated to the liquidity risk. When it happens on the increase in GDP, it will cause a drop in the liquidity risk.

We understand that liquidity risk faced by the bank when comes to the case of the maturity mismatch of both deposits and loans. Hence, it is being represented by the ratio of total loan and total deposits. The reason behind is caused by the

elements that contributed in the GDP which consists of four different elements namely total consumption, investments, government expenditure and net exports. One of the factors that could boost the GDP is the total consumption made in the nation with any kind of spending by the people living in the country. For instance, enjoying an expensive dinner in a 3-stars Michelin restaurant, staying in a 5-stars hotel, spending money on travelling by Grab etc. All of them are being calculated in the total GDP. GDP is just a number and it is just an indicator for people to evaluate whether the economic of the country is in healthy situation. Hence, when the GDP tends to increase in a nation, it means that people tends to spend more and require banks to issue more loan to the public. In another way round, bank could not focus on giving loan as they need enough deposits to cushion their loan and also for them to issue loans. Therefore, commercial banks happen on paying special interest rate to the public meaning that the depositors receive a higher interest rate return by parking their money with the banks at a shorter tenure. For instance, OCBC Bank allows people to deposit their money with only 6 months and paying them 3.85% p.a and AffinBank paying 3.4% p.a with only 6 months of fixed deposits tenure. (RinggitPlus, 2019) From this action taken by the commercial banks in Malaysia, it will contribute in the total consumption of the nation. At the same time, commercial banks will get enough deposits to finance and cushion their loan. Therefore, it explained the significant relationship between GDP and liquidity risk in Malaysia's Commercial Banks.

II. Findings on Impact of Inflation Rate toward Liquidity Risk

The empirical study found that inflation rate does not has a significant relationship with the liquidity risk. Through the multiple regression model

showed that the inflation rate has a p-value at 0.5617 (56.17%) which is higher than 0.05 or 5% significant benchmark level. Furthermore, inflation rate has the β at -0.246285. This indicates that 1 percentage increase in inflation rate will cause the liquidity risk to decrease by 0.246285.

The findings from the study's analysis that has been conducted concluded that inflation rate is not one of the indicators that contributed in the liquidity risk in Malaysia. Hence, the hypothesis null is being accepted.

H₀: There is no significant relationship between both inflation rate and liquidity risk in Malaysia's commercial banks.

H₁: There is significant relationship between both inflation rate and liquidity risk in Malaysia's commercial banks.

From the findings gotten, it shows that it shows contradict to the inference made. As the finding shows that it has no significant relationship between both inflation rate and liquidity risk.

The inflation rate is known to be insignificant to the liquidity risk. Inflation rate is known to be the products and services will become more expensive or the currency value of the country has become smaller and people could not afford the same product with the same amount of money in different time period. When inflation rate of a country increases, it shows that the money value is shrunken, and it will not happen to affect the either of the components of liquidity risk being examined in this study which are total loans and deposits. When inflation rate happens to increase in a nation, it will not encourage people to take more loans or park more money with the bank's deposits; it happens to be the same when the deflation happens in a country, it will only affect the price of goods and services in a country. However, with the changes in price of product and services, it will only

affect the loan amount needed by the borrowers. In another way round, the total deposits will also increase when inflation happens is because the average household income will increase which caused the entire nation has a higher average household income. In the end, inflation rate will be known as no impact on the liquidity risk in Malaysia's Commercial Banks.

III. Findings on Impact of Interest Rate toward Liquidity Risk

The empirical study found that interest rate does not has a significant relationship with the liquidity risk. Through the multiple regression model showed that the interest rate has a p-value at 0.0564 (5.64%) which is higher than 0.05 or 5% significant benchmark level. Furthermore, interest rate has the β at -0.038358. This indicates that 1 unit increase in interest rate will cause the liquidity risk to decrease by 0.038328.

The findings from the study's analysis that has been conducted concluded that interest rate is not one of the indicators that contributed in the liquidity risk in Malaysia. Hence, the hypothesis null is being accepted.

H₀: There is no significant relationship between both interest rate and liquidity risk in Malaysia's commercial banks.

H₁: There is significant relationship between both interest rate and liquidity risk in Malaysia's commercial banks.

From the findings gotten, it shows that it shows contradict to the inference made. As the finding shows that it has no significant relationship between both interest rate and liquidity risk.

In this study, interest rate being used are the interest spread margin between both average interest rate of loan and deposits. Hence, it should be

insignificant to the liquidity risk because no matter the government intended to increase or decrease in the Overnight Policy Rate (OPR) or Kuala Lumpur Interbank Offered Rate (KLIBOR), it will not has huge effect on the interest rate between both deposits and loans as both of them will move together in the same manners, it will not happen in the case that only one of them move while another keep constant. For instance, when government tend to increase in the OPR of the country, it encourages people to save by paying a higher interest rate on saving their money in the fixed deposits; by cutting the OPR of the country, it discourages people to save their money with the bank and encourages people to borrow money from the bank to consume as people getting cheap loan with lower cost. (ComapreHero, 2019) Hence, by both of them are moving in a very similar trend, it will not cause a huge impact on the liquidity risk of the bank as the commercial banks will not suddenly has shortage of deposits or excessively high loans by testing on the interest spread between both.

IV. Findings on Impact of Unemployment Rate toward Liquidity Risk

The empirical study found that unemployment rate does not has a significant relationship with the liquidity risk. Through the multiple regression model showed that the unemployment rate has a p-value at 0.2380 (23.80%) which is higher than 0.05 or 5% significant benchmark level. Furthermore, unemployment rate has the β at -0.036694. This indicates that 1 unit increase in interest rate will cause the liquidity risk to decrease by 0.036694.

The findings from the study's analysis that has been conducted concluded that unemployment rate is not one of the indicators that contributed in the

liquidity risk in Malaysia. Hence, the hypothesis null is being accepted.

H₀: There is no significant relationship between both unemployment rate and liquidity risk in Malaysia's commercial banks.

H₁: There is significant relationship between both unemployment rate and liquidity risk in Malaysia's commercial banks.

In this study, it can be understood as the maturity mismatch for both deposits and loans and it causes the happening of liquidity risk in banks. Hence, the indicator being used to represent liquidity risk in this research is total asset divide by total liabilities. For this case, asset is being represented by the total loans and liabilities is being represented by the total liabilities as this research focus mainly on banks with focus their business purely on giving loans and receiving deposits. Hence, the formula can be manipulated becoming the ratio of total loans to total deposits.

Unemployment rate can be said to be insignificant to the liquidity risk, it is because the fluctuation in the unemployment rate will not affect the maturity for both loans and deposits in the commercial banks. Regardless loans or deposits, they already have a fixed tenure for both borrower or lender to follow, customer might need to pay an extra sum of money when they wanted to settle the loans earlier (ACCA GLOBAL, 2008) and the borrowers will lose the interest earned if they withdraw the deposits before the deposits maturity. (Financial Islam, 2017)

In a nutshell, the findings gotten, it is consistent with the hypothesis made as the researcher believes that there will be no significant relationship between both unemployment rate and liquidity risk based on the previous studies being discussed in the previous chapter.

V. Findings on Impact of Management Efficiency toward Liquidity Risk

The empirical study found that management efficiency does not has a significant relationship with the liquidity risk. Through the multiple regression model showed that the management efficiency has a p-value at 0.9211 (92.11%) which is higher than 0.05 or 5% significant benchmark level. Furthermore, management efficiency has the β at 0.081488. This indicates that 1 unit increase in management efficiency will cause the liquidity risk to increase by 0.081488.

The findings from the study's analysis that has been conducted concluded that management efficiency is not one of the indicators that contributed in the liquidity risk in Malaysia. Hence, the hypothesis null is being accepted.

H₀: There is no significant relationship between both management efficiency and liquidity risk in Malaysia's commercial banks.

H₁: There is significant relationship between both management efficiency and liquidity risk in Malaysia's commercial banks.

By relating the findings of the research back to the past studies that being discussed earlier. There is a study that shown consistency with the findings of the research. A study has been conducted by Ramon et al. (2012) by taking the research period from year 2009 to 2011 which found a result that asset turnover ratio has significantly no relationship with liquidity asset from the education sector perspective of Philippines.

5.0 Conclusion

Relationship between each independent variable and liquidity risk will be outlined by concluding the significance

level of each independent variable towards the liquidity risk in this research. Hence, the relevant party could take appropriate action when comes to the evaluation of liquidity risk and emphasize on the independent variable that would give a huge impact on the liquidity risk in Malaysia's Commercial Banks.

I. Gross Domestic Product (GDP) and Liquidity Risk

From the research above, GDP is the indicator that contributes in the liquidity risk in Malaysia's Commercial Banks. The conclusion is based on the finding that GDP has the negatively significant effect where the p-value of GDP is lesser than the significance level of 5% stating there is significant relationship between both GDP and Liquidity Risk. This means that both regulators and bankers should pay more attention on GDP when it comes to the evaluation of liquidity risk in Malaysia's Commercial Banks.

II. Interest Rate and Liquidity Risk

The study further concludes that interest rate is not one of the determinants or factors that can affect the liquidity risk in Malaysia's Commercial Banks. This is based on the finding that interest rate has a p-value that is higher than the confidence level of 5% and indicates that there is no significant relationship between interest rate and liquidity risk. Therefore, interest rate should not be too emphasis by regulators or bankers who prefer to calculate or evaluate on the liquidity risk of the commercial banks in Malaysia.

III. Inflation Rate and Liquidity Risk

According to the research that presented on top, inflation rate is also not one of the determinants of factors that can impact on the liquidity risk in Malaysia's

Commercial Banks. This conclusion derives from the finding that inflation rate has no significant relationship with the liquidity risk. Hence, regulators or bankers should not take inflation rate into consideration when comes to the calculation of liquidity risk.

IV. Unemployment Rate and Liquidity Risk

The study concludes that unemployment rate is not one of the determinants that could affect the liquidity risk in Malaysia's Commercial Banks. From the tests which have been conducted showing that the significance level of unemployment rate is higher than the significance level of 5% which is 23.80%. Hence, it is clearly stated that there is no significant relationship between both unemployment rate and liquidity risk. Furthermore, unemployment rate should not be used as one of the determinants to figure the liquidity risk in Malaysia's Commercial Banks by both regulators and bankers.

V. Management Efficiency and Liquidity Risk

The research concludes that management efficiency is not one of the determinants that might give an impact to the liquidity risk in Malaysia's Commercial Banks. This conclusion derived from the multiple regression model which has been done in Chapter Four employed on management efficiency and liquidity risk, results showed that management efficiency has no significant to the liquidity risk. In another word saying that management efficiency is inversely proportional to liquidity risk. Hence, management efficiency should not be the factor that should be taken concern by the regulators and banks.

However, there are also researchers show that there is significant relationship between both asset turnover ratio and

liquidity ratio. For instance, a study which has done by Mohammed (2014) with the topic of the role of ratio analysis in business decisions which chosen a case study of NBC Maidugri Plant. The study was done by collected primary data and interviewing a number of interviewees to obtain the result. It shows that asset turnover ratio will cause a significant impact to the liquidity asset holding of NBC Maidugri Plant. Hence, it shows that both variables have significant relationship. Besides that, Sarbapriya (2011) has conducted a study regarding to the financial performance of paper and paper product companies in India in Post-Liberalization Period.

From the findings gotten in chapter four, it shows that it shows contradict to the inference made by researcher in chapter two. As the finding shows that it has no significant relationship between both management efficiency and liquidity risk.

The p-value of management efficiency on liquidity risk shows a extremely high value which is 92.11%, it shows very high value of that, which means that they are totally no relationship. In this study, the management efficiency been represented by asset turnover ratio, which shows that the total sales generated by the total assets of the commercial banks. In this case, we assume that the total assets are equal to the total loan in the industry. On the other side, the liquidity risk is being represented by the ratio of total assets and the total deposits of the nation in every particular year.

Although total asset turnover ratio is a management efficiency ratio which tested on the efficiency of the managements of the banks, but it only focusses on the ability of management on selling the loans and the revenue earned from the loans being issued. However, total asset turnover ratio is less suitable for banks, because

banks do not store up goods to sell on their display rack. In fact, revenue earned by the banks are mainly from fee based or fund-based products, (The Economic Times, 2015) and the services provided by them. Every loan issued by the bank has a specific tenure listed and banker could not simply amend the tenure of loan. For instance, hire purchase has the maximum tenure at 9 years and housing loan at 35 years. (Nair, 2015) Back to the formula of total asset turnover ratio, it means that management do not have the ability to control on the speed of people repay on their loans but only able to issue more loan to get more interest revenue, but people still pay back their instalment slowly on the monthly basis. It is not like normal business which could earn immediate profit from every piece of good sold. Banks business require them to take time for them to receive back the capital and the interest charged to the customer. Hence, all commercial banks involved in the deposits taking and loan giving business will definitely be highly involved in liquidity risk. Lastly, the management efficiency should have no significant relationship with liquidity risk.

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